

## SYRUPS IN CHINESE MEDICINE

Syrups, known as Gao (膏) in Chinese, have a long history in the practice of Chinese medicine. As long ago as the Han dynasty Zhang Zhong-Jing, employed this form of herb preparation. In the *Jin Gui Yao Lue*, Zhang Zhong-Jing suggests that Zao Jiao Wan, a formula to clear phlegm from the lungs, be taken with Zao Gao (a concentrated decoction of Hong Zao). The implication being that this would obviate Zao Jiao Wan's tendency to deplete the body's qi. Other syrups are mentioned in later dynasties. For example, the Tang dynasty physician, Sun Si-Miao, gives detailed instructions on the preparation of syrups and includes several in his writings. Most of the syrups of this period were for supplementation of qi, yin, yang, or fluids. In the Ming and Qing dynasties (approximately 1500 to 1900 CE), the use of syrups increased vastly in both number and diversity of function. It was at this time that the method most commonly employed in modern times gained prominence – the method uses 2-3 boilings of herbs, concentrating them down to a thick liquid, and then adds honey to consolidate the syrup.

### WHEN CAN SYRUPS BE SUITABLE?

Syrups can be seen as a middle ground between the use of decoctions and concentrated granules. Because they can be prepared in a batch large enough for 3-4 weeks of consumption, they offer the convenience of concentrated granules with a potency approaching that of a freshly brewed decoction. Since they are sweetened (with honey, barley malt, sugar, etc.), they taste good, and because they are concentrated, the patient only needs to take 1-2 tablespoons twice a day (with a glass of warm water). These factors lead to very high patient compliance.

For chronic conditions, where treatment involves both root and branch, syrups are ideal. Examples include: insomnia, impotence, mood disorders, prostate disorders, chronic digestive disorders, tinnitus, recurrent headaches, habitual constipation, chronic liver and gallbladder disorders, post-partum vacuity disorders, menstrual disorders, menopausal disorders (night sweating, hot flashes, etc.), high blood pressure, asthma, chronic rhinitis, chronic cough, dizziness or arthritic conditions (including gout). Because they take time to prepare and are essentially unalterable, syrups are not appropriate for acute disorders or situations where the treatment strategy or need for specific herbs may change.

### HOW TO COMPOSE A SYRUP FORMULA

The principles used when composing a syrup formula do not differ largely from those employed for designing a decoction formula. The specifics do vary a bit owing to the unique nature of syrups. The main differences between the two methods are in the number of herbs in the formula and the dosages of the herbs.

#### NUMBER OF HERBS

It is not uncommon for a syrup formula to contain twenty to thirty herbs. The reasons for this are three-fold. First, these formulas address both branch and root, and thus often require two or three complete formulas to do so. Secondly, because the formula is concentrated it puts a bit of a strain on the digestive system. For this reason, in many cases a few herbs are included to assist the digestive function (Sha Ren, Bai Dou Kou, and Chen Pi are frequent additions). Lastly, syrups generally treat complex and chronic disorders. They thus often contain herbs that perform many different functions to match the complex picture with which these patients present.

As an example, treatment of chronic allergic rhinitis will include: herbs to address the locus of the problem (Xin Yi Hua, Bai Zhi, Cang Er Zi), herbs to address the qi vacuity that inevitably accompanies a chronic conditions (Dang Shen, Bai Zhu), herbs to quicken the blood because the chronic inflammation has led to atrophy and stagnation in the local tissues (Chi Shao, Ze Lan, Zao Jiao Ci), herbs to address the heat in the upper burner (Huang Qin, Jin Yin Hua) and, herbs to diffuse lung qi, dispel wind and secure the exterior (Jie Geng, Huang Qi, Fang Feng). In addition, the formula will often include herbs to target the constitution of the patient (Constitutional formulas such as Liu Wei Di Huang Wan, Bu Zhong Yi Qi Tang, Yu Ping Feng San, and Si Jun Zi Tang).



Below is a formula taken from a case study of a 32-year-old man with allergic rhinitis. This patient presented with frequent colds, dry and itching throat, nasal congestion with discharge, occasional cough, and itchy skin. The patient's tongue had a red tip and a thin fur. His pulse was fine, weak and wiry. The doctor (Xu Zhi-Ying) diagnosed the patient with qi (and wei) vacuity that led to an unsecured exterior and qi that failed to move the blood, as well as vacuity of the spleen and kidney. His expressed treatment principle was to boost qi, secure the exterior, dispel wind (wind-heat), disinhibit the throat, fortify the spleen, boost the kidney, quicken blood, and free the collaterals.

Huang Qi 200g, Bai Zhu 120g, Fang Feng 90g, E Bu Shi Cao 40g, Huang Qin (Jiu Chao) 150g, Jie Geng 120g, Zhe Bei Mu 120g, Sang Bai Pi 120g, Zao Jiao Ci 90g, Bai Zhi 120g, Di Fu Zi 120g, She Gan 60g, Zi Cao Gen 120g, Zi Bei Fu Ping 120g, Dang Gui (Jiu Chao) 120g, Bai Zhu (Tu Chao) 120g, Chuan Xiong 150g, Cang Er Zi (Chao) 120g, Sheng and Chao Yi Yi Ren 120g each, Fu Ling 120g, Sang Shen Zi 120g, Du Zhong (Yan Chao) 120g, Xu Duan 120g, Gou Qi Zi 150g, Ling Zhi 100g, Sha Ren 60g, Bai Dou Kou 60g, Fo Shou 120g, Bai Ji Li 100g, Ji Xue Teng 100g, Tu Si Zi 120g, Ba Ji Tian 120g, Chen Pi 90g, Sheng Di Huang 120g, Shou Di Huang 120g.

One can see that a large number of herbs are used in this formula (36). The formula was apparently successful at treating the patient and most syrup-prescribing practitioners use this quantity of herbs. In my experience, that number of herbs is a bit high. I have found that twenty to twenty-five herbs are usually sufficient to address all the complexities of most situations, but there are situations where more are needed.

### HERB DOSAGES

The herb dosages in the formula above (100-200 grams per herb) are in the normal range for syrups. It is instructive to observe that some herbs were prescribed in smaller doses. For example, the E Bu Shi Cao was only given in a dose of 40 grams. I surmise that the reasoning behind this is that, though E Bu Shi Cao is a very effective herb for nasal congestion, it is also a warm and drying herb. Since, in this case, wind-heat is the offending pathogen, the practitioner kept the amount low to avoid a formula that is too hot and dry for the situation. The relatively low doses of Sha Ren and Bai Dou Kou point to the fact that the practitioner thought that this dosage would be sufficient to allow easy digestion of the formula.

Since this formula will provide 3-4 weeks of herbs, the doses are quite moderate, if figured as a daily dosage. Two hundred grams of Huang Qi, for example, over a twenty-five-day period, is equal to only eight grams per day. Five to ten grams per day is average in a syrup formula.

Below is a formula given to a patient diagnosed with enlarged prostate. Symptoms included: painful and inhibited urination, retained urine, frequent urination, decreased sexual drive, incomplete bowel movements, and disturbed sleep. His pulse was moderate, slightly deep, and slightly wiry and his tongue was puffy with a moderate, white fur.

Zhe Bei Mu 160g, Zao Jiao Ci 100g, Bai Jiang Cao 120g, Bai Shao 150g, Chai Hu 80g, Ban Xia (Jiang) 225g, Wang Bu Liu Xing Zi 120g (Dry-fry), Di Fu Zi 200g, Shou Di Huang 100g, Niu Xi (Huai) 100g, Fu Ling 200g, E Zhu 100g, San Leng 100g, Mu Dan Pi 120g, Jie Geng 80g, Chen Pi 80g, Bai Hua She She Cao 200g, Dang Shen 120g, Zhi Gan Cao 60g, Gua Lou Ren 80g, (Crush), Hu Zhang 100g, Huang Bai 80g

Hopefully, these two examples will help readers who do not have experience with syrups to properly construct and dose this form of herb prescription.



## COOKING INSTRUCTIONS

Some practitioners use three cookings of the herbs and some use only two. As might be expected, three cookings produce more syrup. The extended cooking time and the multiple cookings, along with the large number of herbs used are what set syrups apart from other forms of herb preparations. We have found them to be very effective. Here are step-by-step instructions for a double-cooked syrup. A thrice-cooked syrup would follow the same instructions, but with three cookings.

### Instructions for Herb Syrup

1. Place the herbs in a pot and add enough water to cover the herbs.
2. Soak the herbs for 2 hours.
3. If the herbs are not covered with water after soaking add enough water to again cover them.
4. Bring the water and herbs to a boil and then simmer for 60 minutes. (Use a loosely covered pot.)
5. Strain out the herb liquid and put it aside.
6. Put the herbs back into the pot and cover the herbs with water.
7. Bring the herbs to a boil and then simmer for 45 minutes.
8. Strain out liquid and add it to the liquid from the first boiling.
9. Remove the herbs and put the liquid from the two cookings into the pot.
10. Cook on a low flame until the volume is reduced to one eighth to one tenth of its original volume (this can take from 6-10 hours).
11. As the herb liquid thickens, stir. At the end of this step the liquid should be thick like a light syrup - a little thinner than maple syrup. The flame should be adjusted lower and lower as the liquid thickens.
12. Add refined honey (about equal to  $\frac{1}{2}$  the volume of the liquid left in the pot) and continue to cook over a low flame until the mixture thickens to syrup. (Stir and skim off any foam that forms). This consolidating phase will take 3-6 hours.
13. Store the liquid in glass jars (best if these are dipped in boiling water and then dried to sterilize them).
14. Cover only with cheesecloth until the liquid cools to room temperature. Then cover and store in a refrigerator.
15. Take 1-2 tablespoon two times per day with a cup of warm water (either mix the syrup in the water and drink or use the water to wash down the syrup).

### Notes:

- Use a stainless steel or glass pot.
- Cooking times can vary greatly depending on the stove, pot used, and the herbs in the formula. For example, formulas with herbs like Shou Di Huang, Mai Men Dong, and other herbs that produce a viscous extract will produce a thick extract more quickly.
- It is generally a good idea to start with one-tablespoon, twice-per-day dose. If all is well after a few days, increase to two tablespoons twice per day.
- Formulas with herbs that do not produce a viscous extract will require a larger amount of honey in the consolidating phase of cooking.

## A FEW OTHER THOUGHTS ABOUT SYRUPS

### 1. Road-opening Formulas

It is often advisable to use decoctions in what is referred to as “road-opening formulas” (開路方) before prescribing a syrup. Road-opening formulas are decoctions that are given for ten to fifteen days prior to giving a syrup. This strategy is employed for the following reasons:



- In patients with delicate or weakened digestive systems this period of time can be devoted to formulas that supplement the spleen and stomach.
- This period can be used to test out a simplified version of the formula in decoction form to see if it achieves the expected results. This will confirm the practitioner's diagnosis before the patient commits to cooking a month's worth of herbs.
- If the patient's condition is not stable, this time period can be used to stabilize the situation so that a syrup, which is essentially unmodifiable, can be given without worry.

## 2. When a Road-opening Formula is Unnecessary

There is no need for a good road-opening formula for patients whose conditions are not experiencing vicissitudes, for those whose digestive systems are not weakened, and those whose diagnosis is clear.

## 3. Including Granules in the Syrup

If a bulk herb is not available for any reason (for example, Tu Si Zi is not available as a bulk herb because it is an invasive species), one can include concentrated granules in a syrup. To do this, calculate the amount of concentrate to be included (usually around 1 gram per day of syrup) and add granules in toward the end of the last cooking stage of the syrup (during step 11 in the above instructions – about 30-60 minutes before the end of the procedure).

## 4. Dosing for Children

Children are generally given very small doses of condensed liquid (collected after step #11 above) or syrup every 3-4 hours. One teaspoon 4-5 times per day is the usual dose, though it is often wise to begin with smaller doses and increase to this amount.

- **Children under One Year of Age**

Children younger than one years old should not take syrups made with honey, as the honey may contain spores of *Clostridium botulinum* which can cause serious illness or death in infants. Instead, the syrup can be made with other thickener-sweeteners (e.g. sugar or barley malt) or the child can simply take the unsweetened condensed liquid that is available at the end of step #11 above; that is, before the honey is added.

## CONCLUSION

It is hard to explain the remarkable effectiveness of this method of herb preparation. It may be the long cooking times or the synergy of a large number of herbs. Whatever the reason, this is a tool that should be in every practitioner's toolbox. While the preparation time can take a full two days, that effort will produce 3-4 weeks of herbs that are easy to take, good-tasting and often, remarkably effective.

